

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Appellant(s): Eric J. Horvitz, *et al.*

Examiner: Peling Andy Shaw

Serial No: 10/021,621

Art Unit: 2144

Filing Date: December 12, 2001

Title: CONTROLS AND DISPLAYS FOR ACQUIRING PREFERENCES, INSPECTING
BEHAVIOR, AND GUIDING THE LEARNING AND DECISION POLICIES OF AN
ADAPTIVE COMMUNICATIONS PRIORITIZATION AND ROUTING SYSTEM

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Dated: Oct. 27, 2009Signature: Danielle Calder

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CORRECTED APPEAL BRIEF

Dear Sir:

Appellants submit this brief in connection with an appeal of the above-identified patent application. Payment is being submitted via credit card in connection with all fees due regarding this appeal brief. In the event any additional fees may be due in connection with this filing, the Commissioner is authorized to charge such fees to Deposit Account No. 23-2825 (M1103.70715US00).

I. Real Party in Interest (37 C.F.R. §41.37(c)(1)(i))

The real party in interest in the present appeal is Microsoft Corporation, the assignee of the present application.

II. Related Appeals and Interferences (37 C.F.R. §41.37(c)(1)(ii))

Appellants, appellants' legal representative, and/or the assignee of the present application are aware of appeals or interferences which may be related to, will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal. This application, Serial Number 10/021,621 had a previous appeal decided on March 14, 2007. An appeal filed on February 23, 2007 for Application Serial Number 10/220,550 is pending. Additionally, an Appeal Brief was filed for Application Serial Number 10/609,818 on December 10, 2008, but a Notice of Allowance was issued on April 10, 2009.

III. Status of Claims (37 C.F.R. §41.37(c)(1)(iii))

Claims 1-85 stand rejected by the Examiner. The rejection of claims 1-85 is being appealed.

IV. Status of Amendments (37 C.F.R. §41.37(c)(1)(iv))

No claims were amended after the Final Office Action dated February 4, 2008.

V. Summary of Claimed Subject Matter (37 C.F.R. §41.37(c)(1)(v))**A. Independent Claim 1**

Independent claim 1 recites a user interface to manage electronic messages, comprising:
a display providing one or more display objects associated with delivery of one or more messages, the messages being automatically classified according to a respective priority value;
and (*See e.g.*, page 11, lines 5-26)

one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received. (*See e.g.*, page 11, lines 26 to page 12, line 4; page 19, lines 20-26)

B. Independent Claim 23

Independent claim 23 recites a method associated with message delivery, comprising:
generating a priority associated with a message, wherein the message is assigned a predetermined priority associated with a communication channel from which the message is received; (*See e.g.*, page 19, lines 20-26, page 48, line 30 to page 49, line 1)

determining an expected loss of non-review of the message at a current time based at least on the message priority and an expected rate of lost opportunity for the user resulting from non-review of the message as a function of time; (*See e.g.*, page 40, lines 15-28; page 45, lines 1-3)

determining an expected cost of outputting the message at the current time; and (*See e.g.*, page 46, lines 2-3; page 46, line 28 to page 47, line 14)

alerting a user of the message in response to determining that the expected loss is greater than the expected cost. (*See e.g.*, page 45, line 28 to page 46, line 4)

C. Independent Claim 40

Independent claim 40 recites a user interface to manage electronic messages, comprising:
means for providing graphical displays associated with one or more messages that have been automatically classified according to a priority of the respective messages; and (*See e.g.*, page 11, lines 20-21)

means for configuring the graphical displays according to one or more user preferences associated with the priority and delivery of the one or more messages, the one or more user preferences includes one or more deferral policies that are given as bounds such that a message of a particular priority will not wait more than a predetermined amount of time before being displayed to a user. (*See e.g.*, page 11, lines 5-26; page 16, lines 2-12)

D. Independent Claim 41

Independent claim 41 recites a method for delivering messages to a device, comprising:
scheduling a period when one or more user profiles are activated; (*See e.g.*, page 17, line 23 to page 18, line 1)

configuring at least one set of parameters for the one or more profiles; (*See e.g.*, page 14, lines 12-30; line page 17, lines 24-27; page 23, lines 4-9)

assigning priority values to one or more messages, wherein a message is assigned a priority value based upon a predetermined priority associated with a communication channel from which the message is received; and (*See e.g.*, page 19, lines 20-26, page 48, line 30 to page 49, line 1)

delivering the one or more messages based at least in part on the priority values, the profile that is activated, and the at least one set of parameters. (*See e.g.*, page 11, lines 12-14; page 14, lines 14-26; page 21, lines 17-26)

E. Independent Claim 55

Independent claim 55 recites a user interface for an adaptive prioritization and routing system, comprising:

one or more controls and displays to at least one of acquire user preferences, inspect behavior, and guide learning and decision policies of the adaptive prioritization and routing system, wherein the user preferences includes a user defined amount of time of user inactivity of a message retrieval device, wherein the user defined amount of time is a threshold where messages are held back from delivery to the message retrieval device when the threshold is exceeded ; and (*See e.g.*, page 11, lines 5-30; page 6, lines 13-15, page 21; lines 24-25)

a user interface associated with the one or more controls and displays that facilitates inspection, control and learning associated with alerting and routing prioritized messages. (*See e.g.*, page 23, line 26 to page 24, line 24)

F. Independent Claim 78

Independent claim 78 recites a user interface for an adaptive prioritization and routing system, comprising:

one or more controls and displays to acquire message priority settings associated with the adaptive prioritization and routing system ; and (*See e.g.*, page 11, lines 5-26)

a user interface associated with the one or more controls and displays that provides at least a user adjustable control of an amount of messages received *via* the message priority settings and a feedback directed to the user relating to the settings, the feedback includes a

quantity indicating the number of messages that would have been transmitted to a user within a specified bound in time based upon the priority settings (*See e.g.*, page 17, lines 3-22)

VI. Grounds of Rejection to be Reviewed (37 C.F.R. §41.37(c)(1)(vi))

A. Whether claims 1-5, 9-10, 19 and 22 are unpatentable under 35 U.S.C. §102(e) over Smith, *et al.*, (US 6,463,462 B1).

B. Whether claims 23-26 and 34-39 are unpatentable under 35 U.S.C. 102(b) over Robert M. Losee, Jr. (Minimizing Information Overload: The Ranking of Electronic Messages).

C. Whether claim 40 is unpatentable under 35 U.S.C. 102(e) over Smith, *et al.*, (US 6,463,462 B1).

D. Whether claims 41-51 is unpatentable under 35 U.S.C. 102(b) over Juha Takkinen (CAFÉ: A Conceptual Model for Managing Information in Electronic Mail).

E. Whether claims 6, 13 and 21 are unpatentable under 35 U.S.C. 103(a) over Smith, *et al.* in view of Wright, *et al.* (US 6,078,568 A).

F. Whether claims 7-8 are unpatentable under 35 U.S.C. 103(a) over Smith, *et al.* in view of Cooper, *et al.* (US 6,757,362 A).

G. Whether claim 11 are unpatentable under 35 U.S.C. 103(a) over Smith, *et al.*, Badt *et al.*, Horvitz, *et al.* (The Lumiere Project), and further in view of Matthew Marx (CLUES: Dynamic Personalized Message Filtering).

H. Whether claim 12 and 20 are unpatentable under 35 U.S.C. 103(a) over Smith, *et al.* in view of Eggleston *et al.* (US 6,101,531 A).

I. Whether claim 14 are unpatentable under 35 U.S.C. 103(a) over Smith, *et al.* in view of Johnathan Isaac Helfman *et al.* (Ishmail: Immediate Identification of Important Information).

J. Whether claim 15-18 are unpatentable under 35 U.S.C. 103(a) over Smith, *et al.* in view of Abu-Hakima (US 6,499,021 B1).

K. Whether claim 27-23 are unpatentable under 35 U.S.C. 103(a) over Losee in view of Eggleston *et al.* (US 6,499,021 B1).

L. Whether claim 52-54 are unpatentable under 35 U.S.C. 103(a) over Takkinen in view of Abu-Hakima.

M. Whether claim 55-68, 70-71 and 74-77 are unpatentable under 35 U.S.C. 103(a) over Abu-Hakima in view of Wright, *et al.*

N. Whether claim 69 are unpatentable under 35 U.S.C. 103(a) over Abu-Hakima, Wright, *et al.*, and further in view of Horvitz, *et al.* (The Lumiere Project).

O. Whether claim 72-73 are unpatentable under 35 U.S.C. 103(a) over Abu-Hakima, Wright, *et al.*, and Eggleston, *et al.*

P. Whether claim 78-85 are unpatentable under 35 U.S.C. 103(a) over Abu-Hakima in view of Horvitz, *et al.* (The Lumiere Project).

VII. Argument (37 C.F.R. §41.37(c)(1)(vii))

A. Rejection of Claims 1-5, 9-10, 19 and 22 Under 35 U.S.C. §102(e)

Claims 1-5, 9-10, 19 and 22 stand rejected under 35 U.S.C. §102(e) as being anticipated by Smith, *et al.*, (US 6,463,462 B1). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith, *et al.* fails to teach or suggest each and every limitation of applicants' claimed invention.

For a prior art reference to anticipate, 35 U.S.C. §102 requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2USPQ2d 1051, 1053 (Fed. Cir. 1987)).

The subject invention relates to providing controls and displays for acquiring user preferences for a system and method to automatically classify, prioritize, and present information to a user or system in a preferred format, location, and time. The applicants' claimed invention can assign a priority to a message based upon the communication channel from which the message arrived. The incoming communication channel can have a predetermined priority associated with it. For example, all messages received via e-mail are assigned priority A and all messages received via a cell phone are assigned priority B. Independent claim 1 recites *one or more inputs associated with the display objects to facilitate adaptation of the user interface to*

one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received.

Smith, *et al.* does not teach or suggest the aforementioned novel features as recited in the subject claim. The cited reference teaches a messaging system that can receive and send messages from multiple formats by converting the messages into a universal format. Smith, *et al.* does not disclose a system for assigning the priority to a message, but merely states that messages will have differing levels of importance. The system provides a method for a user to establish profiles that can determine which device to employ to deliver messages to the user based upon the message priority. The Office Action dated February 4, 2008 cites Figure 4 and column 6, lines 1-30 as teaching assigning a priority to a message based upon a predetermined priority associated with the communication channel from which a message is received. On the contrary, the reference indicates that a user can assign devices to a particular priority level in a profile, such that when messages are received that already have the particular priority level assigned to them, the devices associated with that priority level will be employed to deliver the message to the user. This section does not disclose assigning priority to messages, but rather discloses assigning devices for delivery to a priority level. The messages will already have a priority associated with them and the user's device priority assignment determines which device to employ. (*See e.g.*, column 6, lines 5-6). Therefore, Smith, *et al.* fails to teach or suggest one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for *assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received.*

In view of at least the foregoing discussion, applicants' representative respectfully submits that Smith, *et al.* fails to teach or suggest all limitations as recited in independent claim 1 (and claims 2-5, 9-10, 19 and 22 that respectfully depend there from), and thus fails to anticipate the subject claims. Accordingly, this rejection should be reversed.

B. Rejection of Claims 23-26 and 34-39 Under 35 U.S.C. §102(b)

Claims 23-26 and 34-39 stand rejected under 35 U.S.C. §102(b) as being anticipated by Robert M. Losee, Jr. (Minimizing Information Overload: The Ranking of Electronic Messages).

It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Losee does not teach each and every element of the subject invention as recited in the subject claims.

For a prior art reference to anticipate, 35 U.S.C. §102 requires that “each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (quoting *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2USPQ2d 1051, 1053 (Fed. Cir. 1987)).

Independent claim 23 recites *generating a priority associated with a message, wherein the message is assigned a predetermined priority associated with a communication channel from which the message is received*. Losee does not teach or suggest the aforementioned novel aspects of applicants’ invention as recited in the subject claim. Losee teaches a system for ranking messages that determines the expected cost of not selecting a message for review. Losee teaches that the cost of rejecting a message is based on the cost of non-review for given a relevance class(priority). The Office Action dated February 4, 2008 contends that Losee discloses this feature in the Abstract and 1st paragraph on page 4. These sections discloses a classification model for classifying messages as relevant or non-relevant based upon probabilities determined for message features as good or bad. The cited art is silent regarding assigning priority based upon *a predetermined priority associated with communication channel from which the message was received*. The Office Action asserts that the communication channel can be a person, a device, e-mail or cell phone and that Losee indicates that the message could be from e-mail, e-bulletin, telephone, a supervisor, or a topic. However, there is no discussion of a predetermined priority associated with a communication channel by Losee, and using this predetermined priority to assign a priority to a message. Losee employs a statistical and economic model over message features to compute a priority ranking for a message. Therefore, Losee fails to teach or suggest generating a priority associated with a message, wherein the message is assigned a predetermined priority associated with a communication channel from which the message is received.

Accordingly, applicants’ representative respectfully submits that Losee fails to teach or suggest all limitations as recited in independent claim 23 (and claims 24-26 and 34-39 that

depend there from), and thus fails to anticipate the subject claims. Therefore, it is readily apparent that this rejection should be reversed.

C. Rejection of Claim 40 Under 35 U.S.C. §102(e)

Claim 40 stands rejected under 35 U.S.C. §102(e) as being anticipated by Smith, *et al.* It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith, *et al.* fails to teach or suggest each and every limitation of applicants' claimed invention.

Independent claim 40 recites *configuring the graphical displays according to one or more user preferences associated with the priority and delivery of the one or more messages, the one or more user preferences includes one or more **deferral policies that are given as bounds such that a message of a particular priority will not wait more than a predetermined amount of time before being displayed to a user.*** The subject claims ensure that messages are routed to the user within a predetermined time frame given their priority. This provides an override mechanism that prevents messages with certain priorities (such as a low priority) from not being presented to a user within a reasonable amount of time. Smith, *et al.* does not teach this novel feature of the subject claim. The Office Action dated February 4, 2008 cites Figures 4 and 20-22, column 6, lines 1-39 and column 10, lines 57-60 as teaching this feature. On the contrary, these cited sections refer to profiles in which the user specifies devices assigned to priorities that are to be employed to deliver messages to the user. The sections also disclose that the user can created schedules that dictate which profiles are active at particular times. These sections are silent regarding any specific time limits within which a message must be delivered to the recipient based upon the message priority. As such, Smith, *et al.* fails to teach or suggest that *the one or more user preferences includes one or more **deferral policies that are given as bounds such that a message of a particular priority will not wait more than a predetermined amount of time before being displayed to a user.***

Therefore, applicants' representative respectfully submits that Smith, *et al.* fails to teach or suggest all limitations as recited in independent claim 40, and thus fails to anticipate the subject claim. As such, that this rejection should be reversed.

D. Rejection of Claims 41-51 Under 35 U.S.C. §102(b)

Claims 41-51 stand rejected under 35 U.S.C. §102(b) as being anticipated by Juha Takkinen (CAFÉ: A Conceptual Model for Managing Information in Electronic Mail), hereinafter referred as Takkinen. It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Takkinen fails to teach or suggest each and every limitation of applicants' claimed invention.

Independent claim 41 recites *assigning priority values to one or more messages, wherein a message is assigned a priority value based upon a predetermined priority associated with a communication channel from which the message is received*. Takkinen teaches a categorization system for e-mail that has three user modes of operation employing three different categorization techniques based upon how busy the user indicates they are currently. However, Takkinen is strictly concerned with e-mail and fails to suggest a predetermined priority associated with a communication channel from which the message is received. The Office Action dated February 4, 2008 cites page 47, left column, last paragraph as teaching this feature. On the contrary, the cited section merely states that if a sender and a user employ the same e-mail system then sorting messages into categories according to priority is easier. Takkinen is silent regarding *assigning priority values to one or more messages, wherein a message is assigned a priority value based upon a predetermined priority associated with a communication channel from which the message is received*.

Accordingly, applicants' representative respectfully submits that Takkinen fail to teach or suggest all limitations as recited in independent claim 41 (and claims 42-51 that depend there from), and thus fails to make obvious the subject claims. For this reason, this rejection should be reversed.

E. Rejection of Claims 6, 13 and 21 Under 35 U.S.C. §103(a)

Claims 6, 13 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Smith, *et al.* in view of Wright, *et al.* (US 6,078,568 A). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith, *et al.* and Wright, *et al.* alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007) citing *Graham v. John Deere Co. of Kansas City*, 383 U. S. 1, 36 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to “guard against slipping into the use of hindsight” (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F. 2d 406, 412 (CA6 1964))).

Claims 6, 13, and 21 depend from independent claim 1. As noted *supra*, Smith, *et al.* does not teach or suggest each and every element of the subject invention as recited in this independent claim, and Wright, *et al.* fails to make up for the aforementioned deficiencies of Smith, *et al.* Wright, *et al.* teaches a system for managing data packets on a communication network and fails to discuss assignment of message priority or assignment of a priority to a communication channel. Therefore, Smith, *et al.* and Wright, *et al.* fail to teach or suggest *one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received* as recited in independent claim 1.

In view of at least the foregoing discussion, applicant’s representative respectfully submits that Smith, *et al.* and Wright, *et al.*, alone or in combination fails to teach or suggest all limitations as recited in independent claim 1 (and claims 6, 13, and 21 that respectfully depend there from), and thus fails to make obvious the subject claims. Accordingly, this rejection should be reversed.

F. Rejection of Claims 7-8 Under 35 U.S.C. §103(a)

Claims 7-8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Smith, *et al.* in view of Cooper, *et al.* (US 6757362 A). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith *et al.* and Cooper, *et al.*, alone or in combination, fail to teach or suggest each and every limitation of applicants’ claimed invention.

Claims 7 and 8 depend from independent claim 1. As noted *supra*, Smith, *et al.* does not teach or suggest each and every element of the subject invention as recited in this independent claim, and Cooper, *et al.* fails to make up for the aforementioned deficiencies of Smith, *et al.* Cooper, *et al.* teaches a system for inputting and receiving information such as e-mail and news by speech. Cooper, *et al.* teaches analysis of acoustical properties of the speech of a user that is retrieving messages for the purpose of identifying the emotional state of the user, so that adjustments can be made in the system voice prompts to be more in line with the user's emotional state. Cooper, *et al.* fails to discuss assignment of message priority or assignment of a priority to a communication channel. Therefore, Smith, *et al.* and Cooper, *et al.* fail to teach or suggest *one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received* as recited in independent claim 1.

In view of at least the foregoing discussion, applicant's representative respectfully submits that Smith, *et al.* and Cooper, *et al.*, alone or in combination fails to teach or suggest all limitations as recited in independent claim 1 (and claims 7 and 8 that respectfully depend there from), and thus fails to make obvious the subject claims. Accordingly, this rejection should be reversed.

G. Rejection of Claim 11 Under 35 U.S.C. §103(a)

Claim 11 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Smith, *et al.*, Badt *et al.*, Horvitz, *et al.*, and further in view of Matthew Marx (CLUES: Dynamic Personalized Message Filtering). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith, *et al.*, Badt *et al.*, and Horvitz, *et al.*, and Marx, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

Claim 11 depends from independent claim 1. As noted *supra*, Smith, *et al.* does not teach or suggest each and every element of the subject invention as recited in this independent claim, and Badt *et al.*, Horvitz, *et al.*, and Marx fail to make up for the aforementioned deficiencies of Smith, *et al.* Badt, *et al.* discloses a system that employs voice recognition to identify a caller.

The system then determines where in the hierarchical organization the caller is positioned. Badt, *et al.* is silent regarding a predetermined priority associated with a communication channel that is used to determine priority of a received message. Horvitz, *et al.* discloses a system for employing Bayesian models for inferring goals of a user. The reference is also silent regarding a predetermined priority associated with a communication channel that is used to determine priority of a received message. Marx teaches a prioritization system for e-mail and phone calls based on rules that are automatically generated by the system. However, the cited reference fails to disclose a predetermined priority associated with a communication channel that is used to determine priority of a received message. Therefore, Smith, *et al.*, Badt, *et al.*, Horvitz, *et al.*, and Marx fail to teach or suggest *one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received* as recited in independent claim 1.

In view of at least the foregoing discussion, applicants' representative respectfully submits that Smith, *et al.*, Badt, *et al.*, Horvitz, *et al.*, and Marx, alone or in combination fails to teach or suggest all limitations as recited in independent claim 1 (and claim 11 that respectfully depend there from), and thus fails to make obvious the subject claims. Accordingly, this rejection should be reversed.

H. Rejection of Claims 12 and 20 Under 35 U.S.C. §103(a)

Claims 12 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Smith and further in view of Eggleston *et al.* (US 6101531 A). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith *et al.* and Eggleston, *et al.*, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

Claims 12 and 20 depend from independent claim 1. As noted *supra*, Smith, *et al.* does not teach or suggest each and every element of the subject invention as recited in this independent claim, and Eggleston, *et al.* fails to make up for the aforementioned deficiencies of Smith, *et al.* Eggleston, *et al.* teaches a system and method for prioritizing e-mail to be downloaded from a server to a local machine. However, the cited reference fails to disclose a

predetermined priority associated with the communication channel that is used to determine priority of a received message. Therefore, Smith, *et al.*, Badt, *et al.*, Horvitz, *et al.*, and Eggleston, *et al.* fail to teach or suggest *one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received* as recited in independent claim 1.

In view of at least the foregoing discussion, applicants' representative respectfully submits that Smith, *et al.* and Eggleston, *et al.*, alone or in combination fails to teach or suggest all limitations as recited in independent claim 1 (and claims 12 and 20 that respectfully depend there from), and thus fails to make obvious the subject claims. Accordingly, this rejection should be reversed.

I. Rejection of Claim 14 Under 35 U.S.C. §103(a)

Claim 14 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Smith and further in view of Johnathan Isaac Helfman *et al.* (Ishmail: Immediate Identification of Important Information). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith *et al.* and Helfman, *et al.*, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

Claim 14 depends from independent claim 1. As noted *supra*, Smith, *et al.* does not teach or suggest each and every element of the subject invention as recited in this independent claim, and Helfman, *et al.* fails to make up for the aforementioned deficiencies of Smith *et al.* Helfman, *et al.* teaches a prioritization system for e-mail based upon keyword based filter rules. However, the cited reference fails to disclose a predetermined priority associated with a communication channel that is used to determine priority of a received message. Therefore, Smith, *et al.*, and Helfman, *et al.* fail to teach or suggest *one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received* as recited in independent claim 1.

In view of at least the foregoing discussion, applicants' representative respectfully submits that Smith, *et al.* and Helfman, *et al.*, alone or in combination fails to teach or suggest all limitations as recited in independent claim 1 (and claim 14 that respectfully depend there from), and thus fails to make obvious the subject claims. Accordingly, this rejection should be reversed.

J. Rejection of Claims 15-18 Under 35 U.S.C. §103(a)

Claim 15-18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Smith and further in view of Abu-Hakima (US 6499021 B1). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Smith *et al.* and Abu-Hakima, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

Claims 15-18 depend from independent claim 1. As noted *supra*, Smith, *et al.*, does not teach or suggest each and every element of the subject invention as recited in this independent claim, and Abu-Hakima fails to make up for the aforementioned deficiencies of Smith *et al.* Abu-Hakima teaches a system for prioritizing messages based on analysis of the message and then forwarding messages to a user based on the priority. However, the cited reference fails to disclose a predetermined priority associated with a communication channel that is used to determine priority of a received message. Therefore, Smith, *et al.* and Abu-Hakima fail to teach or suggest *one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received* as recited in independent claim 1.

In view of at least the foregoing discussion, applicant's representative respectfully submits that Smith, *et al.* and Abu-Hakima, alone or in combination fails to teach or suggest all limitations as recited in independent claim 1 (and claims 15-18 that respectfully depend there from), and thus fails to make obvious the subject claims. Accordingly, this rejection should be reversed.

K. Rejection of Claims 27-33 Under 35 U.S.C. §103(a)

Claim 27-33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Losee and further in view of Eggleston. It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Losee and Eggleston, *et al.* fail to teach or suggest each and every limitation of applicants' claimed invention.

Claims 27-33 depend from independent claim 23. As noted *supra*, Losee does not teach or suggest each and every element of the subject invention as recited in independent claim 23, and Eggleston fails to make up for the aforementioned deficiencies of Losee. Eggleston discloses a system for applying filters to data that is transferred between a host server and a wireless client device. Eggleston, *et al.* is silent regarding assigning priorities to messages, and therefore fails to teach or suggest *generating a priority associated with a message, wherein the message is assigned a predetermined priority associated with a communication channel from which the message is received.*

Accordingly, applicants' representative respectfully submits that Losee and Eggleston, *et al.*, alone or in combination, fail to teach or suggest all limitations as recited in independent claim 23 (and claims 27-33 which depend therefrom), and thus fails to make obvious the subject claims. Therefore, it is readily apparent that this rejection should be reversed.

L. Rejection of Claims 52-54 Under 35 U.S.C. §103(a)

Claim 52-54 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Takkinen and further in view of Abu-Hakima. It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Takkinen and Abu-Hakima alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

Independent claim 41 recites *assigning priority values to one or more messages, wherein a message is assigned a priority value based upon a predetermined priority associated with a communication channel from which the message is received.* Claims 52-54 depend from independent claim 41 and as discussed above, Takkinen does not teach or suggest assigning a priority value to a message based upon a predetermined priority associated with a communication channel from which the message is received, and Abu-Hakima fails to make up for this deficiency of Takkinen. Abu-Hakima teaches a system for prioritizing messages based on analysis of the message and then forwarding messages to a user based on the priority.

However, the cited reference fails to disclose a predetermined priority associated with the communication channel that is used to determine priority of a received message.

Accordingly, applicants' representative respectfully submits that Takkinen and Abu-Hakima, alone or in combination, fail to teach or suggest all limitations as recited in independent claim 41 (and claims 52-54 that depend there from), and thus fails to make obvious the subject claims. AS such, this rejection should be reversed.

M. Rejection of Claims 55-68, 70-71 and 74-77 Under 35 U.S.C. §103(a)

Claim 55-68, 70-71 and 74-77 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Abu-Hakima in view of Wright. It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Abu-Hakima and Wright, *et al.*, alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

Independent claim 55 recites *one or more controls and displays to at least one of acquire user preferences, inspect behavior, and guide learning and decision policies of the adaptive prioritization and routing system, wherein the user preferences includes a user defined amount of time of inactivity of a message retrieval device, wherein the user defined amount of time of user inactivity of the message retrieval device is a threshold where messages are held back from delivery to the message retrieval device when the threshold is exceeded.* The subject claim discloses that messages can be held back from being transmitted to a user if a user's device is inactive for a user defined threshold period of time. As conceded in the Office Action, Abu-Hakima fails to teach this novel feature of the subject claim. Wright *et al.* is silent regarding a user defined amount of time of inactivity of the message retrieval device that is a threshold where messages are held back from delivery to the message retrieval device when the threshold is exceeded. The Office Action dated February 4, 2008 asserts that Wright, *et al.* discloses the bolded feature of the claim. Wright, *et al.* teaches a system for managing data packets on a communication network. The cited section (column 27, lines 26-34) relate to idle time before transmission from a subscriber device. This relates to waiting for a certain number of packets to be transmitted or a specified period of time before a transmission attempt is made. There is a line in this section that indicates that during the idle time, the reverse channel is also not accessed. All of this relates to idle state for the MAC layer at the *sender device* and *not the*

inactivity of the message retrieval device. The MAC layer on the sender device can be inactive while the message retrieval device is actively being used by the user. The sender device is a separate device from the message retrieval device. The Examiner seems to contend that the MAC layer at the sender device has some knowledge of user inactivity at a recipient device. Wright, *et al.* provides no disclosure indicating such knowledge at the MAC layer of the sending device and this is not a common understanding to one skilled in the art. As such, Wright, *et al.* fails to teach or suggest ***the user defined amount of time of user inactivity of the message retrieval device is a threshold where messages are held back from delivery to the message retrieval device when the threshold is exceeded.*** Therefore, Abu-Hakima, and Wright, *et al.* fail to teach all elements of the subject claim.

Accordingly, applicants' representative respectfully submits that Abu-Hakima and Wright, *et al.*, alone or in combination, fail to teach or suggest all limitations as recited in independent claim 55 (and claims 54-68, 70-71 and 74-77 that depend there from), and thus fails to make obvious the subject claims. Therefore, it is readily apparent that this rejection should be reversed.

N. Rejection of Claim 69 Under 35 U.S.C. §103(a)

Claim 69 stands rejected under 35 U.S.C. §103(a) as being unpatentable Abu-Hakima, Wright, *et al.*, and further in view of Horvitz, *et al.* (The Lumiere Project). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Abu-Hakima, Wright, *et al.*, and Horvitz, *et al.* alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

Claim 69 depends from independent claim 55. As noted *supra*, Abu-Hakima, and Wright, *et al.* do not teach or suggest each and every element of the subject invention as recited in independent claim 55, and Horvitz, *et al.* fails to make up for the aforementioned deficiencies of Abu-Hakima, and Wright, *et al.*. Horvitz, *et al.* discloses a system for employing Bayesian models for inferring goals of a user. The cited reference is silent regarding a user defined amount of time of inactivity of the message retrieval device that is a threshold where messages are held back from delivery to the message retrieval device when the threshold is exceeded.

Accordingly, applicants' representative respectfully submits that Abu-Hakima, Wright, *et al.*, and Horvitz, *et al.* alone or in combination, fail to teach or suggest all limitations as recited in

independent claim 55 (and claim 69 that depends there from), and thus fails to make obvious the subject claims. Therefore, it is readily apparent that this rejection should be reversed.

O. Rejection of Claims 72-73 Under 35 U.S.C. §103(a)

Claims 72-73 stand rejected under 35 U.S.C. §103(a) as being unpatentable Abu-Hakima, Wright, *et al.*, and further in view of Eggleston, *et al.* It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Abu-Hakima, Wright, *et al.*, and Eggleston, *et al.* alone or in combination, fail to teach or suggest each and every limitation of applicants' claimed invention.

Claims 72 and 73 depend from independent claim 55. As noted *supra*, Abu-Hakima, and Wright, *et al.* do not teach or suggest each and every element of the subject invention as recited in independent claim 55, and Eggleston, *et al.* fails to make up for the aforementioned deficiencies of Abu-Hakima, and Wright, *et al.* Eggleston, *et al.* discloses a system for applying filters to data that is transferred between a host server and a wireless client device. The cited reference is silent regarding a user defined amount of time of inactivity of the message retrieval device that is a threshold where messages are held back from delivery to the message retrieval device when the threshold is exceeded.

Accordingly, applicants' representative respectfully submits that Abu-Hakima, Wright, *et al.*, and Eggleston, *et al.* alone or in combination, fail to teach or suggest all limitations as recited in independent claim 55 (and claims 72 and 73 that depends there from), and thus fails to make obvious the subject claims. Thus, this rejection should be reversed.

P. Rejection of Claims 78-85 Under 35 U.S.C. §103(a)

Claims 78-85 stand rejected under 35 U.S.C. §103(a) as being unpatentable Abu-Hakima in view of Horvitz, *et al.* (The Lumiere Project). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Abu-Hakima and Horvitz, *et al.* do not teach each and every element of the subject invention as recited in the subject claims.

Independent claim 78 recites *one or more controls and displays to acquire message priority settings associated with the adaptive prioritization and routing system ; and a user interface associated with the one or more controls and displays that provides at least a user adjustable control of an amount of messages received via the message priority settings and a*

feedback directed to the user relating to the settings, the feedback includes a quantity indicating the number of messages that would have been transmitted to a user within a specified bound in time based upon the priority settings. The Office Action dated February 4, 2008 concedes that Abu-Hakima does not teach that the feedback includes a quantity indicating the number of messages that would have been transmitted to a user within a specified bound in time based upon the priority settings. The cited sections (column 8, line 36-48, column 9, line 15-39, column 11, line 19-25 and column 10, line 41-63) are all silent regarding feedback including a quantity indication of the number messages that would have been transmitted to a user within a specified bound in time based upon the priority settings. Column 8, lines 36-48 disclose a user's ability to establish preference ranking for contacts projects and organizations. A what-if function informs the user of what actions would be performed under certain conditions. However, the cited reference fails to disclose that the what-if function can inform the user of the number of messages that they would have received during a given period of time based upon their preference settings. The what-if function merely allows the user to confirm that the correct actions are being taken based upon their preferences. The subject claim allows the user to tune the amount of messages they will receive within a time interval based upon the priority settings. Column 9, lines 15-39, discloses a feature that allows a user to request an explanation for why an agent took a particular action with a message. Column 11, lines 19-25 provides for displaying back to a user a newly learned contact, project, or organization. Column 10, lines 41-63, merely teaches a learning function that learns a sequence of user keystrokes in order to associate then with a user action. Horvitz, *et al.* is cited to make up for the deficiencies of Abu-Hakima. However, Horvitz, *et al.* also fails to teach this feature. The Office Action cites page 5, left column, 3rd paragraph and page 8, right column, 1st paragraph as teaching this feature. On the contrary, 5, left column, 3rd paragraph discusses conditional probabilities in a Bayesian model related to user' goals and observed user actions over a time space. Page 8, right column, 1st paragraph discusses a user settable threshold for controlling when a automated assistant will offer help to a user. The sections are silent regarding and completely unrelated to *feedback including a quantity indicating the number of messages that would have been transmitted to a user within a specified bound in time based upon the priority settings.* Thus, Abu-Hakima and Horvitz, *et al.* fail to teach all of the limitations of the subject claim.

Accordingly, applicants' representative respectfully submits that Abu-Hakima and Horvitz, *et al.*, alone or in combination, fail to teach or suggest all limitations of independent claim 78 (and claims 79-85 that depend there from), and thus fails to make obvious the subject claims. Therefore, this rejection should be reversed.

VIII. CONCLUSION

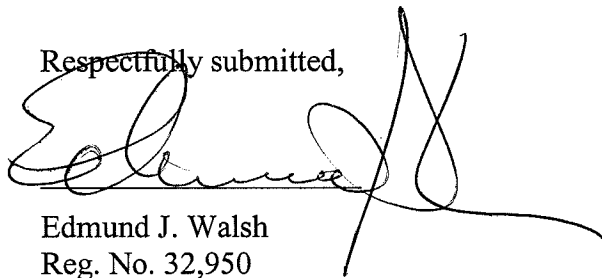
The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP225USA].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact appellants' undersigned representative at the telephone number below.

Dated: Oct 27, 2009

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Edmund J. Walsh', is written over a horizontal line. The signature is stylized with a large initial 'E' and a long, sweeping tail.

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IX. Claims Appendix (37 C.F.R. §41.37(c)(1)(viii))

1. A user interface to manage electronic messages, comprising:
a display providing one or more display objects associated with delivery of one or more messages, the messages being automatically classified according to a respective priority value;
and
one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based upon a predetermined priority associated with a communication channel from which the message is received.
2. The system of claim 1, the one or more display objects including one or more profiles that relate to a time and manner of delivery of the one or more messages.
3. The system of claim 2, the one or more profiles relating to an active profile and a default profile configurable by the user.
4. The system of claim 2, the one or more profiles are associated with one or more delivery options for sending the messages to a device.
5. The system of claim 4, the one or more delivery options including at least one of send messages to a mobile device, send messages from a folder associated with the mobile device, enable prioritized delivery.
6. The system of claim 4, the delivery options including chunking options, the chunking options comprise at least one of holding and delivering messages until a predetermined time specified by the user, holding and delivering messages until a predetermined number of messages have accumulated, and holding and delivering messages based upon a predetermined inactivity of a computer.

7. The system of claim 2, the one or more profiles have an associated priority setting such that messages are transmitted based upon a threshold configurable by the user.
8. The system of claim 7, the priority setting associated with a display object having a slider to adjust the threshold, the threshold having a range from high priority messages sent to all messages sent to a mobile device.
9. The system of claim 2, the one or more profiles including at least one of a calendar and time setting associated with the one or more display objects.
10. The system of claim 2, the one or more profiles are associated with at least one of work, home, out of office and do not disturb.
11. The system of claim 1, the one or more display objects including status information associated with an amount of learning that has been achieved by a priorities system.
12. The system of claim 1, the one or more display objects selectable to send a summary of information to a device associated with the one or more messages.
13. The system of claim 6, the one or more display objects including a reset of the amount of messages sent to the device.
14. The system of claim 1, the one or more display objects comprising one or more rules configurable by the user to effect delivery of the messages to a device, the one or more rules including selection options of at least one of sending messages based on importance, sending messages based on the user's name and a TO field, sending messages based on the user's name and a CC field, and sending messages based on a source of the message.
15. The system of claim 1, further comprising providing feedback to the user *via* the one or more display objects regarding learning associated with a priorities system.

16. The system of claim 15, the feedback includes information relating to learning when messages are deleted by the user.
17. The system of claim 15, the feedback includes information relating to where messages are learned from.
18. The system of claim 15, further comprising at least one of back-up, restore, and reset options regarding the learning.
19. The system of claim 1, further comprising one or more device options relating to how messages are displayed on a device.
20. The system of claim 19, the one or more device options further comprising a selectable compression setting to control the amount of information displayed.
21. The system of claim 19, the one or more device options further comprising limiting a number of messages sent, limiting the number of characters in the messages, and automatically resetting the number of messages sent.
22. The system of claim 19, the one or more device options further comprising configuring display information relating to a sender of the messages.

23. A method associated with message delivery, comprising:
- generating a priority associated with a message, wherein the message is assigned a predetermined priority associated with a communication channel from which the message is received;
 - determining an expected loss of non-review of the message at a current time based at least on the message priority and an expected rate of lost opportunity for the user resulting from non-review of the message as a function of time;
 - determining an expected cost of outputting the message at the current time; and
 - alerting a user of the message in response to determining that the expected loss is greater than the expected cost.
24. The method of claim 23, the expected loss of non-review comprises determining a likelihood that the user will review message text at a future time.
25. The method of claim 23, the expected rate of lost opportunity for the user resulting from non-review of the message as a function of time is non-linear.
26. The method of claim 23, wherein the priority is generated by a classifier configured as at least one of a Bayesian classifier and a support-vector machine classifier.
27. The method of claim 23, further comprising providing a current profile selected from one of a plurality of profiles, at least a portion of the plurality of profiles editable by the user to reflect a different context.
28. The method of claim 27, the plurality of profiles is schedulable on a per-day and by-time basis.
29. The method of claim 28, the plurality of profiles provides a chunk setting such that the message is delivered to a communications modality in conjunction with one or more other messages.

30. The method of claim 28, the plurality of profiles provides a chunk setting such that the message is delivered to a communications modality when a specified period has expired.

31. The method of claim 23, further comprising, prior to alerting the user, formatting the message.

32. The method of claim 31, the formatting comprises compressing the message.

33. The method of claim 31, the formatting comprises fragmenting the message.

34. The method of claim 23, further comprising determining an expected criticality for the prioritized messages.

35. The method of claim 34, wherein the expected criticality (EC) is expressed as:

$$EC = \sum_i C^d(H_i) p(H_i | E^d)$$

wherein C is a cost function that relates to a cost rate at which cost is accrued, d is a delay, E is an event, and H is a criticality class.

36. The method of claim 34, wherein the expected criticality is expressed as a function of time.

37. The method of claim 36, an expected loss is expressed as at least one of:

$$EL = \sum_i^n p(\text{critical}_i) C(\text{critical}_i) t; \text{ and}$$

$$EL = \int_0^t p(\text{critical}_i) C(\text{critical}_i, t) dt$$

wherein EL is an expected loss, $p(\text{critical}_i)$ is a probability that a message has criticality i , $C(\text{critical}_i)$ is a cost function for the message having the criticality i , n is a total number of criticality classes minus one, and t is the time delay before reviewing the message.

38. The method of claim 37, the expected loss is expressed as at least one of:

$$EL' = \sum_j p(t_j|E) \sum_i^n p(critical_i) C(critical_i) t_j; \text{ and}$$

$$EL' = \sum_j p(t_j|E) \int_0^{t_j} p(critical_i) C(critical_i, t) dt$$

wherein EL' is an uncertainty in time of delay, E represents one or more observations about a user state, and i and j are indexes, i and j being integers.

39. The method of claim 38, E is at least one of a calendar, a room acoustic, a desktop activity, a time since last touched an active device.

40. A user interface to manage electronic messages, comprising:

means for providing graphical displays associated with one or more messages that have been automatically classified according to a priority of the respective messages; and

means for configuring the graphical displays according to one or more user preferences associated with the priority and delivery of the one or more messages, the one or more user preferences includes one or more deferral policies that are given as bounds such that a message of a particular priority will not wait more than a predetermined amount of time before being displayed to a user.

41. A method for delivering messages to a device, comprising:

scheduling a period when one or more user profiles are activated;

configuring at least one set of parameters for the one or more profiles;

assigning priority values to one or more messages, wherein a message is assigned a priority value based upon a predetermined priority associated with a communication channel from which the message is received; and

delivering the one or more messages based at least in part on the priority values, the profile that is activated, and the at least one set of parameters.

42. The method of claim 41, further comprising assigning at least one of a color and a sound to indicate the priority of the messages.

43. The method of claim 41, further comprising deferring messages until a more convenient time established by the user.

44. The method of claim 41, further comprising providing status information relating to why a message is of a determined priority.

45. The method of claim 41, further comprising observing a previous history of activity and providing feedback as to a message delivery volume based upon the history.

46. The method of claim 41, further comprising employing an information agent to consider restrictions from other parties before delivering the one or more messages.

47. The method of claim 41, further comprising activating one or more rules that operate to influence when messages are sent to a user.

48. The method of claim 47, the one or more rules include an if and then construct such that if an event occurs then a message is automatically assigned a predetermined priority.

49. The method of claim 47, the one or more rules include an if and then construct such that if an event occurs then a priority value of a learning process is disclosed.

50. The method of claim 41, the one or more rules include an if and then construct such that if a message is received from a selected communications channel, then a message is automatically assigned a predetermined priority.

51. The method of claim 41, further comprising automatically reviewing messages by an order determined by the priority value.

52. The method of claim 41, further comprising automatically calling the user if the priority value is above a predetermined threshold.

53. The method of claim 41, further comprising converting audio messages into text.

54. The method of claim 53, further comprising determining a priority for the messages based upon at least one of the pitch, rate, content, and inflection of the messages.

55. A user interface for an adaptive prioritization and routing system, comprising:
one or more controls and displays to at least one of acquire user preferences, inspect behavior, and guide learning and decision policies of the adaptive prioritization and routing system, wherein the user preferences includes a user defined amount of time of user inactivity of a message retrieval device, wherein the user defined amount of time is a threshold where messages are held back from delivery to the message retrieval device when the threshold is exceeded; and

a user interface associated with the one or more controls and displays that facilitates inspection, control and learning associated with alerting and routing prioritized messages.

56. The user interface of claim 55, further comprising a plurality of parameters that are configured in conjunction with various configuration and adjustment options to facilitate personalization of the user interface.

57. The user interface of claim 56, the personalization includes at least one of employing explicit and implicit user feedback relating to how messages are classified and subsequently provided to the user.

58. The user interface of claim 57, the feedback is employed to guide learning and decision policies in the adaptive prioritization and routing system.

59. The user interface of claim 57, the feedback includes dialog that is provided to users to further refine at least one of learning and decision policies in the adaptive prioritization and routing system.

60. The user interface of claim 57, the explicit feedback includes such actions as configuring the user interface to consider a selection of messages as being more important than another selection of messages and altering learning about how decisions are made regarding message urgency.

61. The user interface of claim 57, the implicit feedback includes monitoring various context aspects of the user to determine message importance.

62. The user interface of claim 61, the implicit feedback includes at least one of monitoring sounds, keyboard activities, presence detectors, pauses when reviewing messages, how quickly messages are opened and deleted, and whether messages are saved, copied and forwarded.

63. The user interface of claim 57, the feedback includes directing messages to the user regarding learning decisions such as at least one of “You are about to delete messages that have not yet been employed in the learning process,” and messages relating to how and why messages were classified a certain priority.

64. The user interface of claim 55, further comprising one or more configuration and adjustment options that include at least one of profile options, routing options, alerting options, chunking options, schedule options, and context-sensitive control options.

65. The user interface of claim 64, the chunking options include grouping M messages, M being an integer, the M messages are held as a group before delivery of the messages to the user.

66. The user interface of claim 55, further comprising one or more rules that act in conjunction with a routing system, learning status and configuration options for guiding and inspecting the state of learning of a message urgency system.

67. The user interface of claim 66, the one or more rules including conditions that are applied in at least one of a disjunctive and a conjunctive manner.

68. The user interface of claim 55, further comprising one or more device option configurations for controlling message output to a selected message reception and display device.

69. The user interface of claim 55, further comprising prioritized messages having acoustical properties including at least one of prosodic features, temporal patterns of rate, pitch, inflections, and an overall energy associated with voice messages.

70. The user interface of claim 55, further comprising a priority threshold adjustment that facilitates control of how many messages are sent to a users device.

71. The user interface of claim 70, further comprising an overlay adjustment that limits the number of messages sent to the users device per a given timeframe.

72. The user interface of claim 55, further comprising a threshold adjustment that is employed as a bound on the total dollars allotted for forwarding messages to a user.

73. The user interface of claim 72, the user specifies that a system sends the most urgent messages, but at a certain cost per message by a routing company, adjust the threshold so that it would expect to stay within a certain cost per day.

74. The user interface of claim 55, further comprising one or more deferral policies that are given as bounds such that a message of a particular urgency will not wait more than at least one of a predetermined and dynamically computed upper limit of time.

75. The user interface of claim 74, the policies are at least in part based on a function of the message urgency.

76. The user interface of claim 75, a user specifies at least one of that a message of high urgency should be transmitted with an alert to one or more active devices as soon as possible and to be available for review if the user happens to inspect messages that are waiting.

77. The user interface of claim 76, further comprising a policy that if the user is more than a specified level of non-interruptability and the message has not been observed, then wait a predetermined time before alerting the user.

78. A user interface for an adaptive prioritization and routing system, comprising:
one or more controls and displays to acquire message priority settings associated with the adaptive prioritization and routing system ; and
a user interface associated with the one or more controls and displays that provides at least a user adjustable control of an amount of messages received *via* the message priority settings and a feedback directed to the user relating to the settings, the feedback includes a quantity indicating the number of messages that would have been transmitted to a user within a specified bound in time based upon the priority settings.

79. The user interface of claim 78, the feedback includes a quantity of alerts that would have been transmitted to the user within a specified bound in time.

80. The user interface of claim 78, further comprising monitoring user actions for each of several different routing parameters based upon a threshold on importance required to send a message beyond the parameters that were employed.

81. The user interface of claim 78, further comprising a user display including at least one of what would have happened had the settings been changed, and a display for a set of thresholds along a continual scale thresholds.

82. The user interface of claim 81, the feedback further comprising previously tracked numbers of messages that would have been received at different simulated values of the threshold.

83. The user interface of claim 82, further comprising providing feedback over at least one of a day, week, and month that is displayed at respective settings so as to be reviewed by users as guides to roughly predict future behavior of the adaptive prioritization and routing system for potential settings of the threshold.

84. The user interface of claim 82, further comprising employing recent history as a predictor of the future.

85. The user interface of claim 82, further comprising advanced simulations that are employed to perform “what-if” analyses for at least one of different settings, parameters and policies, such that new settings can be based on an expected number of alerts per given timeframe at different settings.

X. Evidence Appendix (37 C.F.R. §41.37(c)(1)(ix))

None.

XI. Related Proceedings Appendix (37 C.F.R. §41.37(c)(1)(x))

Decision on appeal for Application Serial Number 10/021,621 issued on March 14, 2007.

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ERIC J. HORVITZ and GREGORY P. BARIBAULT

Appeal 2007-0209
Application 10/021,621
Technology Center 2100

Decided: March 14, 2007

Before JAMES D. THOMAS, KENNETH W. HAIRSTON,
and JEAN R. HOMERE, *Administrative Patent Judges*.

HOMERE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal from the Examiner's final rejection of claims 1 through 85 pursuant to 35 U.S.C. § 134. We have jurisdiction under 35 U.S.C. § 6(b) to decide this appeal.

The Examiner rejects the pending claims as follows:

- A. Claims 23-26 and 34-39 are unpatentable under 35 U.S.C. §102(b) over Robert M. Losee, Jr. (Minimizing Information Overload: The Ranking of Electronic Messages).
- B. Claims 1-10 and 40 are unpatentable under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463, 462 B1) in view of Badt *et al.*, (US 6,542,868 B1), Anderlind *et al.*, (US 6,781,972 B1), Wright *et al.*, (US 6,078,568 A), and Cooper *et al.*, (US 6,757,362 A).
- C. Claims 1 and 11 are unpatentable under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463,462 B1) in view of Badt *et al.* (US 6,542,868 B1) and Matthew Marx (CLUES: Dynamic Personalized Message Filtering), hereinafter referred as Marx.
- D. Claims 1, 12, 13 and 19-22 are unpatentable under 35 U.S.C. §103(a) over Smith, *et al.*, (US 6,463, 462 B1) in view of Badt *et al.*, (US 6,542,868 B1), Eggleston *et al.* (US 6,101,531 A), and Wright *et al.*, (US 6,078,568 A).
- E. Claims 1 and 14 are unpatentable under 35 U.S.C. §103(a) over Smith *et al.*, (US 6,463, 462 B1) in view of Badt *et al.*, (US 6,542,868 B1), and Jonathan Isaac Helfman *et al.* (Ishmail: Immediate Identification of Important Information).
- F. Claims 1 and 15-18 are unpatentable under 35 U.S.C. §103(a) over Smith *et al.*, (US 6,463, 462 B1) in view of Badt *et al.*, (US 6,542,868 B1), and Jonathan Isaac Abu-Hakima (US 6,499,021 B1)
- G. Claims 27-33 are unpatentable under 35 U.S.C. §103(a) over Robert M. Losee, Jr. (Minimizing Information Overload: The Ranking of Electronic Messages) as applied to claim 23 above, and further in view of Eggleston *et al.* (US 6,101,531 A).

H. Claims 41-54 are unpatentable under 35 U.S.C. §103(a) over Juha Takkinen (CAFÉ: A Conceptual Model for Managing Information in Electronic Mail) in view of Badt *et al.*, (US 6,542,868 B1) and Jonathan Isaac Abu-Hakima (US 6,499,021 B1).

I. Claims 55-85 are unpatentable under 35 U.S.C. §103(a) over Jonathan Isaac Abu-Hakima (US 6,499,021 B1) in view of Bady *et al.*, (US 6,542,868 B1), Wright *et al.*, (US 6,078,568 A), and Eggleston, *et al.* (US 6,101,531 A).

The Examiner relies on the following references:

Wright	US 6,078,568 A	Jun. 20, 2000
Eggleston	US 6101531 A	Aug. 8, 2000
Smith	US 6463462 B1	Oct. 8, 2002
Abu-Hakima	US 6499021 B1	Dec. 24, 2002
Badt	US 6542868 B1	Apr. 1, 2003
Cooper	US 6757362 A	Jun. 29, 2004
Anderlind	US 6781972 B1	Aug. 24, 2004

Helfman, "Ishmail: Immediate Identification of Important Information," (1995).

Marx, "CLUES: Dynamic Personalized Message Filtering," 113-121 (1996).

Losee, "Minimizing Information Overload: The Ranking of Electronic Messages." *Journal of Information Sciences* 15, 179-189, (1989).

Independent claims 1 and 23 are illustrative and representative of the Appellants' invention. They read as follows:

1. A user interface to manage electronic messages, comprising:

a display providing one or more display objects associated with delivery of one or more messages, the messages being automatically classified according to a respective priority value; and

one or more inputs associated with the display objects to facilitate adaptation of the user interface to one or more preferences of a user, the one or more inputs includes at least one or more user preferences for assigning a priority value to a voice message based at least in part on acoustical properties of the voice message.

23. A method associated with message delivery, comprising:
generating a priority associated with a message;
determining an expected loss of non-review of the message at a current time based at least on the message priority and an expected rate of lost opportunity for the user resulting from non-review of the message as a function of time;
determining an expected cost of outputting the message at the current time; and
alerting a user of the message in response to determining that the expected loss is greater than the expected cost.

Appellants contend that Losee does not anticipate claims 23 through 26 and 34 through 39. Particularly, Appellants contend that Losee does not fairly teach or suggest determining an expected rate of lost opportunity to the user as a function of time, as recited in representative claim 23. (Br. 6, Reply Br. 6). Appellants also contend for the same reasons that Losee, taken in combination with Eggleston, does not render claims 27 through 33 unpatentable under 35 U.S.C. § 103 (a). Further, Appellants contend that Smith and Badt in various combinations with Aderlind, Marx, Eggleston, Helfman, Abu Hakima, Wright and Cooper do not render claims 1 through 22 unpatentable under 35 U.S.C. § 103 (a). Particularly, Appellants argue that the proposed combinations do not fairly teach or suggest assigning a priority value to a voice message based at least in part on acoustical

properties of the voice message, as recited in representative claim 1. (Br. 8, Reply Br. 9). Additionally, Appellants contend for the same reasons that Badt in various combinations with Takkinen, Abu-Hakima, Wright and Eggleston, does not render claims 41 through 85 unpatentable under 35 U.S.C. § 103 (a). (Br. 11, 12, Reply Br. 13).

The Examiner, in contrast, contends that Losee teaches comparing the expected cost of not-reviewing a message with the cost of reviewing the message to determine whether it is cost-effective for the user to review the message. (Answer 4 and 34). Therefore, the Examiner concludes that Losee anticipates the invention as recited in representative claim 23. (*Id.*) For the same reasons, the Examiner concludes that it would have been obvious to one of ordinary skill to combine Losee with Eggleston to yield the invention, as recited in dependent claims 27 through 33. (Answer 21). Further, the Examiner contends that Badt teaches analyzing a voice mail to identify the speaker and to prioritize the voice message accordingly. (Answer 8, 36). Therefore, the Examiner concludes that it would have been obvious to one of ordinary skill in the art to combine the teachings of Smith and Badt with Aderlind, Marx, Eggleston, Helfman, Abu Hakima, Wright and Cooper to yield the claimed invention, as recited in representative claim 1. (*Id.*, 10, 12, 15, 18, 20). Similarly, the Examiner contends that it would have been obvious to combine the teachings of Badt with those of Takkinen, Abu-Hakima, Wright and Eggleston to yield the invention as recited in claims 41 through 85. (Answer 24, 27, 29).

We affirm.

ISSUES

The *pivotal* issues on appeal before us are as follows:

(1) Under 35 U.S.C. § 102 (b), does Losee's disclosure anticipate the claimed invention when Losee teaches comparing the cost of not reviewing a message with cost of reviewing the message to determine which course of action is more cost-effective to the user?

(2) Under 35 U.S.C. § 103 (a), would one of ordinary skill in the art at the time of the present invention have found that Badt's disclosure in combination with other references that the Examiner relies upon to render the claimed invention unpatentable when Badt teaches analyzing a voice message to determine a speaker's identity to prioritize the voice message accordingly?

FINDINGS OF FACT

At the outset, we note that the Examiner's factual findings throughout the Answer regarding the specific teachings of Smith, Aderlind, Marx, Eggleston, Helfman, Cooper, Takkinen, Abu-Hakima, and Wright are not in dispute. Similarly, the majority of Examiner's findings with respect to Losee and Badt are not in dispute except as outlined in the preceding paragraphs. Accordingly, we are adopting the Examiner's factual findings regarding the cited references as they pertain to the undisputed claim limitations.

Appellants invented a method and system for displaying and classifying messages in a user interface according to the user selected priority values. (Specification 10, figure 1). Particularly, the user designates certain preferences according to which their received messages should be prioritized. Such preferences or priority values can be based on the

acoustical properties of a received voice message. (Specification 11). Additionally, Appellants' invention determines the cost of reviewing a message as well as the loss of opportunity resulting from not reviewing the message to alert the user when it is cost-effective to review the message. (Specification 40). More particularly, the invention expresses the cost of not reviewing the message as an expected rate of lost opportunity per unit of time to the user resulting from not reviewing the message. (*Id.*)

Losee discloses a method of ranking electronic messages by economic worth to minimize information overload.¹ (Abstract 179). Particularly, Losee discloses an economic model that determines and compares the cost of examining a message with the cost of not examining the message. If the cost of examining the message exceeds the cost of not doing so, the user is advised not to examine the message (181) to prevent information overload, which might result in an economic and opportunistic loss to the user. (179).

Badt discloses an audio notification management system that analyzes a voice message to determine the identity of the speaker, as well as the speaker's level within an organization. Badt further discloses assigning a priority value to the message based on the speaker level in the organization. Therefore, the higher the speaker's level in the organization the greater the priority value that will be assigned to the message (col. 4, ll. 30-63).

¹ Losee at page 179 defines information overload as the receipt of more information than is needed or desired to function effectively and further the goals of an individual or organization.

PRINCIPLES OF LAW

1. ANTICIPATION

It is axiomatic that anticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim. *See In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986) and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

In rejecting claims under 35 U.S.C. § 102, a single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. *Perricone v. Medicis Pharmaceutical Corp.*, 432 F.3d 1368, 1375-76, 77 USPQ2d 1321, 1325-26 (Fed. Cir. 2005), citing *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565, 24 USPQ2d 1321, 1326 (Fed. Cir. 1992). Anticipation of a patent claim requires a finding that the claim at issue “reads on” a prior art reference. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346, 51 USPQ2d 1943, 1945 (Fed Cir. 1999) (“In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.”) (internal citations omitted).

2. OBVIOUSNESS (Prima Facie)

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). *See*

also In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. *Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444. *See also Piasecki*, 745 F.2d at 1472, 223 USPQ at 788. Thus, the Examiner must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the Examiner's conclusion.

ANALYSIS

As set forth above, representative claim 23 requires the expected rate of lost opportunity to the user resulting from not reviewing the message to be expressed *as a function of time*. Similarly, Losee teaches that the cost to a user for reviewing a message can be expressed in terms of an economic loss ensuing from information overload when that cost exceeds the cost of not reviewing the message. This information overload translates into the additional time that the user must spend reviewing the extraneous information in the message. This additional time lost by the user in turn translates into a time period during which the user could have pursued other opportunities. Hence, we find that Losee implicitly teaches that the time not spent by the user to review the extraneous information translates into an opportunity for the user as a function of time. Therefore, after considering

the entire record before us, we conclude that Appellants have not established that the Examiner erred in finding Losee's teachings anticipate claim 23. For the same reasons, we conclude that the Examiner did not err in finding that Losee's teachings anticipate dependent claims 23 through 26 and 34 through 39. Additionally, for the same reasons, we conclude that the Examiner did not err in finding that the combination of Losee and Eggleston renders dependent claims 27 through 33 unpatentable.

Next, we address independent claims 1, 40, 41, 55 and 78.

Representative claim 1 requires assigning a priority value to a voice message based upon its acoustical properties. Similarly, Badt teaches assigning a priority level to a voice message based on the speaker's level within the organization. We recognize that Badt does not specifically detail that the acoustical properties of the voice message must be examined. However, one of ordinary skill in the art would have readily recognized that in order to identify the speaker, the acoustical properties of the message must necessarily be first examined. After considering the entire record before us, we conclude that Appellants have not established that the Examiner erred in rejecting representative claims 1 through 22 as being unpatentable over Smith and Badt in various combinations with Aderlind, Marx, Eggleston, Helfman, Abu Hakima, Wright, and Cooper. We also conclude for the same reasons that Appellants have not established that the Examiner erred in rejecting dependent claims 41 through 85 as being unpatentable over the teachings of Badt with those of Takkinen, Abu-Hakima, Wright, and Eggleston.²

² Appellants have not presented any substantive arguments directed separately to the patentability of the dependent claims. In the absence of a

CONCLUSION OF LAW

On the record before us, Losee's disclosure anticipates the claimed invention under 35 U.S.C. § 102(b) when Losee teaches comparing the cost of reviewing a message with the loss of opportunity resulting from not reviewing the message to determine which course of action is more cost-effective to the user. Further, one of ordinary skill in the art at the time of the present invention, would have found that Badt's disclosure in combination with other references that the Examiner relies upon to render the claimed invention unpatentable under 35 U.S.C. § 103(a) when Badt teaches analyzing a voice message to determine a speaker's identity to prioritize the voice message accordingly.

separate argument with respect to the dependent claims, those claims stand or fall with the representative independent claim. *See In re Young*, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991). *See also* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

DECISION

We affirm the Examiner's decision to reject claims 23 through 26 and 34 through 39 under 35 U.S.C. § 102 (b). We also affirm the Examiner's decision to reject claims 1 through 22, 27 through 33 and 40 through 85 under 35 U.S.C. § 103 (a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

JRH

ELD

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